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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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BILL L. DAVIS

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Sanford E. Warren, Jr.
Gardere, Wynne, Sewell LLP
1601 Elm Street
Suite 3000
Dallas, TX 75201-4761

EXAMINER

FUNK, STEPHEN R

ART UNIT

PAPER NUMBER

2854

DATE MAILED: 10/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/315,796

Applicant(s)

DAVIS ET AL.

Examiner

Stephen R Funk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41, 44-48, 58, 59, 82-84 and 152-158 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 12-14 and 39-41 is/are allowed.
- 6) ☐ Claim(s) 6-11, 15-38, 44-48, 58, 59 and 152-158 is/are rejected.
- 7) ☒ Claim(s) 82-84 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Claims 11, 15, 16, 24 - 28, 31, 34 - 36, 38, 44 - 48, 82 - 84, and 153 are objected to because of the following informalities:

In claim 11 line 2 it is not clear which “flexographic printing station” is being referred to. There are first and second flexographic printing stations recited in parent claim 10.

In claim 15 lines 10 - 11 “at least said first one of said flexographic printing stations” lacks proper antecedent basis. Note that the terminology in lines 6 - 9 has been changed to only recite a first flexographic printing station. Note the amendment to claim 16 line 2 for comparison.

In each of claims 24 and 25 it is recited that at least one of the flexographic stations prints “said flexographic ink image”. However, in parent claim 17 lines 6 - 9 it is only positively recited that the first flexographic printing station prints “a flexographic color ink image” with no mention in the last line that the second flexographic printing station prints a flexographic ink image. Accordingly, it would appear that the recitations in claims 24 and 25 could only refer to the first flexographic printing station.

In each of claims 31 and 34 - 36 the steps of “printing a coating”, “printing an overcoating”, “printing an aqueous-based coating”, and “printing an ultraviolet coating” would appear to be a double recitation of the now recited coating step in claim 29 last line. As currently recited, the steps in claims 31 and 34 - 36 appear to recite “further” coatings. If the steps in claims 31 and 34 - 36 are further limiting the coating step in claim 29 then the claims should refer back to the coating step in claim 29.

In claim 38 line 8 “said at least one additional printing station” lacks proper antecedent basis. Note the amendment to claim 38 line 5.

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In claim 44 line 5 "a substrate" should be --the substrate--.

In claim 45 line 2 "station" should presumably be plural since first and second flexographic printing stations have been recited in parent claim 44.

In claim 82 line 6 --at-- should be inserted before "least".

In claim 153 line 8 "lithographic" should be --flexographic--.

Appropriate correction is required.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10, 29, 31, 44 - 47, 152, 153, 156, and 157 are rejected under 35 U.S.C. 102(e) as being anticipated by Hartung et al. (US 5,630,363).

With respect to claim 10, Hartung et al. teach a plurality of successive printing stations, one of said stations comprising a first flexographic printing station (56 or 16) for printing a first color image (column 2 lines 44-46), a second flexographic printing station downstream of the first flexographic station (16, column 6 lines 4-9), at least one of the successive stations

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comprising an offset printing station (12, 13, 14, or 15). The term “successive” is interpreted as being successive to both the first and second flexographic stations. The recitation of printing a second color image over the first color image in the last two lines of claim 10 is merely an intended use of the apparatus. The offset lithographic printing station is capable of printing a second color image over the first color image.

With respect to claim 29 Hartung et al. further teach printing a flexographic ink image at a first flexographic station (56 or 16, column 5 lines 56-63), printing a colored ink image (column 5 line 62-63) on top of the flexographic ink image at a subsequent lithographic printing station (11-15), and coating the substrate at a second flexographic station (17 or 57). The printing of the first white ink image at the first flexographic station inherently provides the background for the subsequent colored ink images.

With respect to claim 31 note again the coating step at the second flexographic station (17 or 57).

With respect to claims 44, 153, and 157, Hartung et al. teach a first flexographic station (56), a first lithographic station (11), a second flexographic station (16, column 6 lines 4 - 9), and a second lithographic station (12-15). Again, the printing on top of a previously printed image is merely an intended use wherein the apparatus of Hartung et al. has the capability of doing such.

With respect to claim 45 see column 6 lines 8 - 10 of Hartung et al.

With respect to claim 46 lithographic printing units inherently print ink.

With respect to claim 47 see column 1 lines 8 - 10 of Hartung et al.

With respect to claims 152 and 156, Hartung et al. teach a first lithographic station (11), a first flexographic station (16, column 6 lines 4 - 9), a second lithographic station (12, 13, or 14),

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and a second flexographic station (16, column 6 lines 4 - 9). Again, the printing on top of a previously printed image is merely an intended use wherein the apparatus of Hartung et al. has the capability of doing such.

Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hartung et al. Hartung et al. do not teach a web and web feeder. However, webs are notoriously conventional in the art. It would have been obvious to one of ordinary skill in the art to provide the apparatus of Hartung et al. with a web feeder so as to achieve the advantages of printing with a continuous web as opposed to individual sheets.

Claims 6 - 9, 11, 15 - 18, 20 - 23, 25 - 28, 58, and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartung et al. in view of Bird (US 4,841,903).

With respect to independent claim 6 Hartung et al. teach a first lithographic station (11), a first flexographic station (16, column 6 lines 4 - 9) printing a suspended metallic material (column 5 lines 7 - 9), and a second lithographic station (12-15).

With respect to independent claim 15 Hartung et al. teach a first flexographic station (56), first and second lithographic stations (11-15), and a second flexographic station (57).

With respect to independent claim 17 Hartung et al. teach a first flexographic station (56), a succeeding lithographic station (11-15), and a second flexographic station (57).

With respect to independent claim 58 Hartung et al. teach at least two flexographic stations (16, 17, 56, 57) including a first flexographic station (56) and at least one subsequent lithographic station (11-15).

Hartung et al. does not teach an offset flexographic station, i.e. a blanket cylinder. Bird teaches a printing station (12) convertible from a lithographic inking station (column 5 lines 13 -

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18 and 25 - 27) to an offset flexographic station (column 5 lines 13 - 18 and 40 - 44). Hartung et al. teach in column 6 lines 4 - 9 that flexographic stations (16) may be inserted between two *or more* lithographic stations (11-15). It would have been obvious to one of ordinary skill in the art to provide the apparatus of Hartung et al. with an offset flexographic printing station in view of Bird so as to more easily convert a lithographic station to a flexographic station at the beginning (56, Figure 3) of the apparatus, between (column 6 lines 4 - 9) two or more lithographic stations, or at the end (16, Figure 1) of the lithographic stations. Thus, the apparatus of Hartung et al., as modified by Bird, could be quickly converted to any of the three *or more* possible arrangements disclosed by Hartung et al.

With respect to claims 7 and 8 it would have been obvious to one of ordinary skill in the art to provide the metallic particles of Hartung et al. (column 5 lines 2 - 10) with uniform or nonuniform sizes to achieve the desired optical effect.

With respect to claims 9, 11, 15, 16, and 59 note the plate cylinder (19a), flexographic plate (20a), blanket cylinder (23a), and impression cylinder (24a) of Bird. Note also the plate cylinder (20.1), flexographic plate (column 4 lines 10 - 11), impression cylinder (18.1), and anilox roller/flexographic ink providing means (column 4 lines 9 - 15) of Hartung et al.

With respect to claim 18 note the comments above with respect to claim 46.

With respect to claim 20 Bird teaches that flexographic images should be dried. See column 5 lines 23 - 45 of Bird. It would have been obvious to one of ordinary skill in the art to provide the apparatus of Hartung et al. with a drier in view of Bird so as to adequately dry the flexographic ink before subsequent printing.

With respect to claims 21 and 22 halftone plates are widely conventional in the art to provide the desired shading.

With respect to claim 23 note the comments above with respect to claim 47.

With respect to claims 25 - 28 note the comments above with respect to claims 7 and 8.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hartung et al. in view of Bird as applied to the claims above, and further in view of Sharp (US 4,403,550). Hartung et al. do not teach waterless inks. Sharp teaches the advantages of waterless lithographic inks. See column 2 line 66+ of Sharp. It would have been obvious to one of ordinary skill in the art to provide the apparatus of Hartung et al., as modified by Bird, with a waterless ink in view of Sharp so as to provide higher printing quality.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hartung et al. in view of Bird as applied to the claims above, and further in view of Schumacher et al. (US 5,079,044). Hartung et al. do not teach printing an encapsulated essence. Schumacher et al. teach printing an encapsulated essence. See column 1 lines 29 - 31 of Schumacher et al., for example. It would have been obvious to one of ordinary skill in the art to provide the apparatus of Hartung et al., as modified by Bird, with an encapsulated essence in view Schumacher so as to obtain a scratch-and-sniff printed substrate.

Claims 29, 31, 33, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartung et al. in view of Pantone. With respect to independent claims 29 and 38 Hartung et al. teach the method as recited with possible exception of printing colored ink images on top of a metallic ink flexographic image. Note the comments above with respect to claim 29. Pantone teaches that process colors should be printed after, and ostensibly on, the metallic inks since the

metallic inks are opaque. It would have been obvious to one of ordinary skill in the art to provide the method of Hartung et al. with the step of printing colored images on the metallic flexographic image in view of Pantone so as to provide colored metallic images.

With respect to claim 31 note the comments above with respect to claim 31.

With respect to claim 33 conventional oleophilic lithographic inks are solvent based.

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hartung et al. in view of Pantone as applied to the claims above, and further in view of Bird. Bird has been addressed above with respect to claim 20. It would have been obvious to one of ordinary skill in the art to provide the method of Hartung et al., as modified by Pantone, with a drier in view of Bird so as to adequately dry the flexographic ink before subsequent printing.

Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hartung et al. in view of Pantone as applied to the claims above, and further in view of Sharp. Sharp has been addressed above with respect to claim 19. It would have been obvious to one of ordinary skill in the art to provide the method of Hartung et al., as modified by Pantone, with a waterless ink in view of Sharp so as to provide higher printing quality.

Claims 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartung et al. in view of Pantone as applied to the claims above, and further in view of Schumacher et al. Schumacher et al. has been addressed above with respect to claim 24. It would have been obvious to one of ordinary skill in the art to provide the method of Hartung et al., as modified by Pantone, with an encapsulated essence in view Schumacher so as to obtain a scratch-and-sniff printed substrate. With respect to claim 35 Hartung et al. teach an aqueous coating (17, 57).

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hartung et al. in view of Pantone and Schumacher et al. as applied to claims 34 and 35 above, and further in view of Bird. Hartung et al. do not teach UV curing the coating. Bird teaches UV curing a coating. See column 6 lines 1 - 5 of Bird, for example. It would have been obvious to one of ordinary skill in the art to provide the method of Hartung et al., as modified by Pantone and Schumacher et al., with the step of UV curing the coating in view of Bird so as to provide a faster curing and more durable coating.

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hartung et al. in view of Bird and Sharp. Hartung et al. teach applying a flexographic ink at a first flexographic station (16), transferring the substrate to a second flexographic station (16, column 6 lines 4 - 9) and applying a second flexographic ink, and printing an ink pattern over the flexographic pattern at a subsequent lithographic station (12-15). Hartung et al. do not teach applying the flexographic ink with a blanket cylinder or printing a waterless ink at the lithographic station. Bird teaches the desirability of providing a convertible flexographic station with a blanket cylinder (23a). Sharp teaches the advantages of waterless lithographic printing. See column 2 line 66+ of Sharp. It would have been obvious to one of ordinary skill in the art to provide the method of Hartung et al. with a blanket cylinder in the flexographic station in view of Bird so as to more easily convert the lithographic stations to flexographic stations and use waterless ink in view of Sharp to achieve higher quality images.

Claims 154, 155, and 158 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartung et al. in view of Bird (US 4,939,992) and Rodi (US 5,115,741).

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Hartung et al. teach a first lithographic station (11), a first flexographic station (16, column 6 lines 4 - 9), a second lithographic station (12), and a second flexographic station (16 or 17/57). Hartung et al. do not teach driers after the printing stations. Bird teaches providing driers (29) after each flexographic station. See the Abstract of Bird, for example. Rodi teaches providing driers (22) after each lithographic (offset) station (3 - 6). It would have been obvious to one of ordinary skill in the art to provide the apparatus and method of Hartung et al. with driers after each of the flexographic and lithographic stations in view of Bird and Rodi so as prevent smearing of the printed images in subsequent printing stations.

Claims 1 - 5, 12 - 14, and 39 - 41 are allowed.

Claims 82 - 84 would be allowable if rewritten or amended to overcome the objections set forth in this Office action.

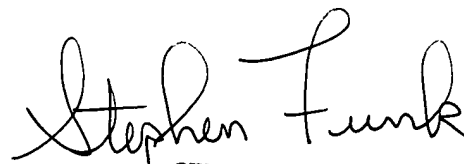
Claims 42, 43, 49 - 57, 60 - 81, and 85 - 151 have been canceled.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen R. Funk whose telephone number is (571) 272-2164.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Hirshfeld, can be reached at (571) 272-2168.

The fax phone number for ALL official papers is (703) 872-9306. Upon consulting with the examiner *unofficial* papers only may be faxed directly to the examiner at (571) 273-2164.

SRF
October 7, 2004



STEPHEN R. FUNK
PRIMARY EXAMINER